




**STATE OF TENNESSEE**  
**DEPARTMENT OF TRANSPORTATION**  
**TRAFFIC OPERATIONS DIVISION**  
SUITE 1800, JAMES K. POLK BUILDING  
505 DEADERICK STREET  
NASHVILLE, TENNESSEE 37243-1402  
(615) 253-1122

**CLAY BRIGHT**  
COMMISSIONER

**BILL LEE**  
GOVERNOR

**To:** Will Reid  
Assistant Chief Engineer of Operations  
**From:**  Brad Freeze,  
Director of Traffic Operations Division  
**Date:** August 20, 2019

**Subject:** Proprietary Items Certification and Justification

The Tennessee department of transportation is providing a certification specifying the following devices to be used on the Intelligent Transportation Systems (ITS) SmartWay Local Area Networks. These devices (or its equivalent) can be used on projects throughout the state of Tennessee (on ITS SmartWay networks) over the next three years using federal funds. The network devices are listed as following:

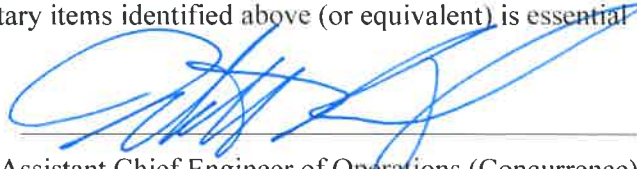
- Aggregation Services Routers: Cisco 1000 Series
- Connected Grid Routers: Cisco 1000 and 2000 Series
- Industrial Integrated Services Routers: Cisco 800 Series
- Integrated Services Routers: Cisco 4000 Series
- Integrated Services Rugged Router: Cisco IR1101
- Enterprise Switches: Cisco Catalyst 9200 and 9300 Series
- Network Switches: Cisco Industrial Ethernet 3200, 3300, 3400, 4000, 4010, and 5000 Series
- Industrial Compute Gateway: Cisco IC3000

Using above Cisco Routers and Switches is necessary for the following reasons:

- 1- Compatibility with currently installed core network equipment for the advanced operation and security of the ITS networks and devices.
- 2- Synchronization capabilities for spare parts inventory of the network switching systems and software applications to enable and support connectivity, configuration, and network management.
- 3- Interoperability with local network equipment and software.
- 4- Executing container based applications on edge devices to enable distributed computing across the network.
- 5- Covered by the in-house knowledge and certifications acquired by the TMC support personnel.

This selection is essential for the synchronization of existing ITS infrastructure equipment to ensure enhanced, secure, and continuous performance of the network. Such performance is dependent on the compatibility of the supporting equipment and software and the availability of spare parts inventory.

I, Brad Freeze, Director of Traffic Operations Division, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a) and 23 CFR 630.112(c) that the patented or proprietary items identified above (or equivalent) is essential for the performance and synchronization of existing facilities.

  
Assistant Chief Engineer of Operations (Concurrence)